

REMARKS

Claims 1 - 8 are pending in the application. Applicants cancel claim 1 and amend claim 2 to include the limitations of canceled claim 1, cancel claim 3 and amend claim 4 to include the limitations of canceled claim 3, and amend claims 5 - 7. No new matter is introduced

OBJECTED CLAIMS

Applicants thank the Examiner for indicating that claims 5 - 8 are currently objected to as each being dependent on a rejected base claim, but that each would be allowable if re-presented in independent form including all limitations of the rejected base claim and any intervening claims. Applicants amend claims 5 and 7 to include the limitations of base claim 3, and amend claim 6 to include the limitations of base claim 3 and intervening claim 4. Current claim 8 depends from amended claim 7. Accordingly, Applicants submit that amended claims 5 - 7 and claim 8 are allowable, and respectfully request that the objection be withdrawn.

OBJECTION TO DRAWING

Figure 1 is objected to under MPEP § 608.02(g) for failing to include the legend –Prior Art--. A replacement sheet is provided for Figure 1, in cleans and marked-up versions, to add include the legend –Prior Art--. Accordingly, Applicant respectfully requests approval of the replacement drawing sheet and withdrawal of this objection.

REJECTION UNDER 35 U.S.C. § 103

Claims 1 - 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,893,024 to Sanders et al. Applicants cancel claims 1 and 3 without prejudice or disclaimer, amend claim 2 to include the limitations of canceled claim 1, amend claim 4 to include the limitations of canceled claim 4, and respectfully traverse the rejection.

Sanders discloses a method and apparatus for reducing ingress noise in a cable communication system. Cable access unit 106 of Sanders includes first and second separation filters 220, 216, gate switch 212 and detection controller 206, 208, 210, 211 for selectively turning on gate switch 212 when it is judged that subscriber device 102 is transmitting an upstream signal (see, e.g., FIG. 2 of Sanders). The detection controller of Sanders makes this judgment by analyzing the duration and interval between pulses transmitted as a preamble to the upstream signal (see, e.g., column 4, lines 6 – 10 and FIG. 3 of Sanders).

Applicants' disclosed ingress noise control system and device also relies on detecting a preamble transmission as a first step in judging whether or not an upstream signal is present. However, in addition, Applicants' claimed system includes a synchronous detection judging unit which obtains a spectrum of the upstream signal synchronously detected by the synchronous detection controller and which, based on the ratio of signal levels at predetermined frequencies, judges whether or not the upstream signal is a valid upstream signal or noise. If as a result of the spectral analysis it is judged that the spectral level for each of a plurality of frequencies is nearly equal, the detected signal is presumed to be noise, and the gate switch for passing or not passing an upstream signal remains closed.

A comparison of Applicants' claimed device to the apparatus of Sanders can be made with reference to Applicants' FIGs. 2, 3. Sanders discloses only detecting the wave shape of an upstream signal (a pulse shape) in a time domain, and analyzing the duration of pulses and interval between pulses as compared to reference data stored in a memory. This functionality is included in the functionality of synchronous detection controller 6 as shown in FIG. 2.

By way of contrast, Applicants' claimed invention further includes spectrum detector 16 in combination with synchronous detection judging unit 15 of FIG. 3, which further detect a frequency spectrum of an upstream signal within a frequency domain, and analyze spectral levels of detected frequency components of the upstream signal are analyzed to determine whether the

upstream signal is a valid signal. Sanders fails to disclose or suggest additionally performing such a spectral analysis to determine whether an upstream signal is valid, or is actually noise.

Accordingly, Applicants respectfully submit that amended claims 2 and 4 are not made obvious by Sanders, and are in condition for allowance.

CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 2, 4, and 5 - 8, consisting of independent claims 2, 4, and 5 - 7 and dependent claim 8, are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,



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